Predicting Products Practice Name:_____Date:_____

Part I: Predict the products for each reaction. Then balance the equation.

Single Replacement:

1. _____ $Ni(s)$ + 2 $AgNO_3(aq)$ → $Ni(NO_3)_2(aq)$ + $2Ag(s)$

Ni replaces Ag

Ag leaves aqueous soln

2. 2 $H_2O(l)$ + 2 $K(s)$ → $2KOH(aq)$ + $H_2(g)$

H leaves as H_2

$H(OH)$

K replaces H^+

3. _____$Br_2(l)$ + _____$NaI(aq)$ →

4. _____$Zn(s)$ + _____$HCl(aq)$ →

5. _____$HF(aq)$ + _____$Cl_2(g)$ →

Double Replacement:

6. _____$HCl(aq)$ + _____$NaOH(aq)$ → $NaCl_{(aq)}$ + ~~HOH~~ $H_2O(l)$ ☆ $H(OH) = H_2O$

1+ 1- 1+ 1-

Positive ions switch

7. _____$BaCl_2(aq)$ + _____$H_2SO_4(aq)$ → $2HCl(aq)$ + $BaSO_4(s)$

2+ 1- 1+ 2-

Positive ions switch

soluble insoluble

8. _____$AgNO_3(aq)$ + _____$K_3PO_4(s)$ →

9. _____$Ba(OH)_2(aq)$ + _____$HI(aq)$ →

Combustion: COMBUSTION of Hydrocarbon Always Makes CO_2 and H_2O

10. _____$CH_4(g)$ + 2 $O_2(g)$ → $CO_2(g)$ + $2H_2O(g)$

11. _____$C_4H_{10}(g)$ + _____$O_2(g)$ →

Part II: Mixed Review: First, identify the type of rxn, then predict the products and balance the equation.

Rxn Type

_____ 12. _____$C_6H_6(l)$ + _____O_2 →

_____ 13. _____$Cl_2(g)$ + _____$AlBr_3(aq)$ →

_____ 14. _____$Ca(s)$ + _____$HCl(aq)$ →

_____ 15. _____$NH_4Cl(aq)$ + _____$Pb(NO_3)_2(aq)$ →

_____ 16. _____ $AgNO_3(aq)$ + _____ $Ca(s)$ →

_____ 17. _____$C_7H_{14}(l)$ + _____$O_2(g)$ →

_____ 18. _____$Mg_3(PO_4)_2(aq)$ + _____$BaCl_2(aq)$ →

_____ 19. _____$Zn(s)$ + _____$Pb(NO_3)_2(aq)$ →

_____ 20. _____$CaCl_2(aq)$ + _____$Na_2CO_3(aq)$ →